

ABSTRACT

5 An internal combustion engine (1) provided with a
valve mechanism (VM) able to change a valve opening
characteristic of at least one of an intake valve (Vi)
and exhaust valve (Ve), a cylinder pressure sensor (15)
for detecting a cylinder pressure in a combustion chamber
(3), and an ECU (20), wherein the ECU (20) calculates the
amount of air sucked into the combustion chamber (3)
10 based on an intake air pressure during valve overlap
between the intake valve (Vi) and the exhaust valve (Ve),
the exhaust gas pressure during valve overlap, a cylinder
pressure during the compression stroke detected by a
cylinder sensor (15), and a gas passage effective area
15 during valve overlap.